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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/608,099 | 06/30/2003 | Sang Jun Park | 7986.005.00-US | 8106 |
| 30827 | 7590 | 09/19/2005 | EXAMINER | |
| MCKENNA LONG & ALDRIDGE LLP 1900 K STREET, NW WASHINGTON, DC 20006 | | | TILL, TERRENCE R | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1744 | |

DATE MAILED: 09/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/608,099 | PARK, SANG JUN | |
| | Examiner | Art Unit | |
| | Terrence R. Till | 1744 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

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DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: In the specification, applicant repeatedly recites the term “support sphere” to identify one of the elements of the apparatus. A “sphere” is really a ball or round object. It appears from the drawings that the support sphere is really a support pin or cylinder even. Calling this element a “sphere” is misleading. Applicant would need to amend paragraphs 9, 15-18, 53, 54 and 57 to use a more appropriate term. Additionally, in paragraph 47, line 9, “link0” should be --link--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. In each of the independent claims, applicant recites the term “support sphere” to identify one of the elements of the apparatus. A “sphere” is really a ball or round object. It appears from the drawings that the support sphere is really a support pin or cylinder even. Calling this element a “sphere” is misleading. Applicant would need to amend paragraphs 9, 15-18, 53, 54 and 57 to use a more appropriate term

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claim 18, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim '243 in view of Roney et al. and Humphrey.

8. The patent to Kim discloses an apparatus of driving an agitator of an upright vacuum cleaner having a driving shaft roller 4, an elastic member 8, a fixing panel 5 and a rotational driving part 16, a support "sphere" (screw in figure 5a), a roller support part 6, a manipulating means 12 connected indirectly to the support "sphere" and a stop means 19. Kim does not disclose a bushing installed on the outer circumference of the driving shaft. The patent to Roney et al. discloses a very similar device to that of Kim and further discloses a bushing 46 installed on the outer circumference of the driving shaft. It would have been obvious to a person skilled in the art at the time the invention was made to provide a bushing installed on the outer circumference of the driving shaft in order to provide a pivotal connection between the canister

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assembly and nozzle assembly of Kim, so that the upright part (canister assembly) can rotate about the nozzle assembly. Kim also does not disclose an idle roller. The patent to Humphrey discloses a belt clutch assembly in which there is used an idle roller 41 mounted on a roller support part. It would have been obvious to a person skilled in the art at the time the invention was made to provide an idle roller to the roller support part of Kim in view of the teaching of Humphrey in order to reduce the friction between the belt and the support part of Kim, extending the life of the belt.

9. Claims 19-21, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim '243 in view of Humphrey.

10. With respect to claim 19, Kim is considered to disclose an apparatus of driving an agitator of an upright vacuum cleaner having a driving shaft roller 4, an elastic member 8, a fixing panel 5 and a rotational driving part 16, a rotational guide 15, a support "sphere" (screw in figure 5a), a roller support part 6, a manipulating means 12 connected indirectly to the support "sphere" and a stop means 19. Kim does not disclose an idle roller. The patent to Humphrey discloses a belt clutch assembly in which there is used an idle roller 41 mounted on a roller support part. It would have been obvious to a person skilled in the art at the time the invention was made to provide an idle roller to the roller support part of Kim in view of the teaching of Humphrey in order to reduce the friction between the belt and the support part of Kim, extending the life of the belt. With respect to claim 20 the Humphrey discloses an insertion groove (see figure 3- roller captured between screw and washer which define a groove). It would have been obvious to a person skilled in the art at the time the invention was made to provide an insertion groove to the roller support part of Kim in view of the teaching of Humphrey in order to capture

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the roller to prevent it from coming off. With respect to claim 21, Kim, as modified by Humphrey, do not disclose that the roller is formed only on a partial outer circumference of the roller support part. However, it would have been an obvious matter of engineering choice to a person skilled in the art at the time the invention was made to modify the size of the roller to be formed only on a partial outer circumference of the roller support part, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *Gardner v. TEC systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984).

Allowable Subject Matter

11. Claims 1-17 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

12. Claims 22 and 23, as best understood, would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter: With respect to claims 1 and 11, the prior art does not disclose nor render obvious the claimed combination of subject matter, particularly a rotational driving part which the bushing is inserted at a center thereof, the rotational driving part rotating around the driving shaft roller (claim 1) and a rotational driving part including a rotation guide which is shaped in a circular skirt into which a bushing inserted and rotated.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

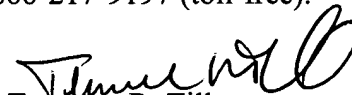
14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents to Kim '453, Swann, White, Eppler, Weber et al., Brickner et al. and Japanese patent to Yamamoto all disclose belt drive devices in vacuum cleaners.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terrence R. Till whose telephone number is (571) 272-1280. The examiner can normally be reached on Mon. through Thurs. and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sun U. Kim can be reached on (571) 272-1142. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Terrence R. Till
Primary Examiner
Art Unit 1744

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